# BRRAG MEETING #1—ADDITIONAL COMMENTS FOLLOWING MEETING

## CLARIFICATIONS/POLICY

**1. Impose any additional requirements contained in the General Permit for Biosolids Management (GP) that are not in the current rule. A briefing on this will be provided during the meeting. See Significant Differences Between chapter 173-308 WAC & the General Permit.**

- From Kyle Dorsey: Tenelco disagrees with this recommendation, particularly since the rule update is not a consensus process. Our concern here is basically a question of program implementation and best working policy. The purpose of the rule is to create a standard floor for implementing the program, The purpose of the permit program is to create the necessary discretion to account for variables in site and facility conditions and thereby implement a program which is protective of public health and the environment. While it might be convenient or on some level satisfying, there appears to be no critical reason for incorporating general permit conditions which exceed the basic requirements of the rule, into the rule itself. Once in place, such conditions will be much harder to adjust or repeal than if they remain only in the permit. Further, incorporating such conditions in the rule limits the appeal opportunity to challenging the rule itself at the time of adoption.

**2. Clarify our position that the rule applies to all treatment works treating domestic sewage (TWTDS), including any person, site or facility that has been designated as a TWTDS in accordance with the rule.**

- From Kyle Dorsey: Tenelco concurs with this statement. It was the original intent of the rule to use the case of being a TWTDS as the threshold for coming under the permit program. If there are grey areas – storage tanks for example, the agency may want to more closely investigate the definition of TWTDS and its possible interpretations.

**3. Clarify our position that if a lagoon is part of the wastewater treatment system, then the National Pollutant Discharge Elimination System (NPDES) permit or State Waste Discharge permit (SWDP) or other water pollution control permit is applicable. However, if a lagoon is not part of the wastewater treatment process, then the solids in the lagoon are considered to be stored and are subject to the biosolids rule, including a 2-year storage limit and the standards for surface impoundments. The 2-year storage limit can be extended upon department approval.**

- From Kyle Dorsey: Tenelco understands the rationale here, but has concerns with this approach. First, federal rules require biosolids permits (in some form) for all facilities holding NPDES permits. The agency must be able to ensure that

biosolids program requirements are addressed for these facilities under a permit. Historically, the Water Quality program at Ecology has deferred biosolids requirements to the Solid Waste & Financial Assistance Program and has not implemented biosolids program requirements in its permits. In fact, the two programs have worked deliberately at creating a separation and eliminating overlap. Secondly we question whether the Solid Waste & Financial Assurance Program is conceding significant regulatory authority over lagoons which are integral parts of the wastewater treatment process. What will happen when solids are removed from such a lagoon? Will the biosolids standards have ever been in place for that material prior to removal? How will this affect design considerations for new facilities and upgrades? Treatment systems which accumulate biosolids should at a minimum periodically determine the amount of solids accumulated as well as the quality of the material in order to stave off the unpleasant circumstance of an overfull system, or worse, one overfull with a nasty product. Biosolids management requirements need to be in place wherever biosolids are accumulated, and they need to be considered anytime a facility is being designed or upgraded. Can this be assured if the SWFAP defers to the WQ program? Tenelco has no objection to clarifying authority for lagoons which are not are in fact storage facilities subject to appropriate regulation under the biosolids program.

**4. Explicitly address the applicability of the rule/permitting requirements on facilities located on tribal land, facilities in other states, and facilities in other countries.**

- From Kyle Dorsey: Tenelco recalls from previous discussions with an Assistant Attorney General, the concept of a *long arm doctrine* (or some such). Essentially the idea is that just because a facility is located outside of Washington, does not mean it is exempt from state laws if it violates them inside Washington. Certainly, extending such reach across an international boundary could be more problematic. Tenelco recommends that the agency investigate the noted doctrine to determine whether an explicit statement of jurisdiction is necessary, or how it could be best sculpted. As regards facilities on Indian lands, Tenelco has always understood these to be facilities subject only to the jurisdiction of U.S. EPA. That having been said, the intended mechanism for regulating those facilities (originally) was to focus on the point of use outside of Indian lands, or to enlist U.S. EPA assistance in regulating the treatment works on Indian lands.

**5. Clearly state our policy that we expect reports from all TWTDS on a form provided by Ecology.**

- From Kyle Dorsey: Tenelco concurs.

**6. Add language stating that an approved sampling plan will be required for anyone seeking to use Class A – Alternative 4. Alternatively delete this alternative entirely. See Class A – Alternative 4 Position Paper.**

- From Kyle Dorsey: Tenelco has not been a supporter of Alternative 4 in the past and has in the past supported the idea of eliminating this alternative. On further consideration, Tenelco believes removal of the alternative would be unwise because it would eliminate a method of demonstrating Class A for Class A processes which failed some processing standard (pH, temperature, time), where reprocessing was not practical. Tenelco fully concurs with the idea of an approved sampling plan, but is it implied then that sampling plans under Alternative 4 would likely have a higher standard than for other Class A or B approaches?

**7. Change the standards for surface impoundments storing biosolids from those in WAC 173-304-430 to those in WAC 173-350-330.**

- From Kyle Dorsey: Tenelco recalls that the intent at the time the original rule was written was to conform to the existing solid waste standard and not create a second set of criteria for surface impoundments. It seems reasonable to make the noted revision, but Tenelco also concurs with Ecology comments below that careful consideration needs to be given here to timing and impact to existing facilities. One possible approach would be to simply assign the revised requirement to "new" facilities and those undergoing upgrades which include the liner component. Ultimately, if the facility is protective of the environment Tenelco does not have a strong opinion on this matter. Has the agency considered the implications under 3 above where it is proposed to defer to the Water Quality program? Would the 430 standards be met or be applicable in that case?

**8. Impose the program policy on permitting of storage tanks. See <u>Requirements for Storage Tanks</u> position paper.**

- From Kyle Dorsey: Tenelco concurs that improperly managed storage can pose a threat to the environment and we believe designation is an appropriate avenue. Ecology can articulate a policy at any time and the ability to designate TWTDS already exists so we assume this issue is being raised at this time in order to facilitate communication? We are concerned about secondary containment and what standards might be measured to justify the cost. Looking at the position paper, it may be more effective for Ecology to incorporate this language in a revised general permit or in a separate permit specifically designed to address the storage issue. Such a permit could be issued with the noted exemptions and enabling designation language for other facilities.

**9. Change the required analytical methods to include updated methods and manual editions. Also amend the language to allow for the ongoing use of updated, EPA-approved methods or updated editions of existing manuals so that when a new method or manual edition is available, the rule does not need to be amended.**

- From Kyle Dorsey: Tenelco recommends conferring with U.S. EPA, specifically the National Laboratory in Cincinnati. There was significant discussion on the analytical methodologies with the adoption of the original federal rules. In particular, the question of referring to revised editions of Standard Methods or other guidance documents has been raised *many* times. The view may have changed more recently, but historically EPA was quite adamant about referencing a specific edition and methodology because it would presumably be the method they had validated for the purpose. They could not, for example, vouch for a new method of detecting Salmonella as appropriate for the biosolids matrix just because it had been published for some other purpose.

**10. Impose the GP requirements that biosolids sold or given away in a bag or other container must meet EQ standards. This eliminates the need for WAC 173-308-160, Table 4 and WAC 173-308-900, Appendix A.**

- From Kyle Dorsey: First, Tenelco concurs with this recommendation. Table 4 has not been used in Washington to our knowledge; we have no knowledge of its use anywhere else for that matter. Essentially, the idea is that if a finished product (in a bag) has too much lead in it, the manufacturer would state an appropriate application limitation *because it has too much lead.* Tenelco believes any such overt statement of limits on use based on contamination would likely crush any hope of successfully marketing a product. Table 4 is essentially a rule without an advocate, or at least without a practical use. As regards the argument below about addition of zinc, Tenelco thinks this scenario is unlikely. First, it would require the addition of zinc to an excess of 2,800 ppm. Admittedly, without further investigation Tenelco wonders whether a product with zinc at this level would have an actual agronomic application (or a real need). The matter is perhaps resolved, however, even with the elimination of Table 4. It is established that once a product is EQ it escapes regulatory gravity. If the blending is done apart from the generating treatment works then the rule need not apply to begin with. If done at a treatment works under permit, some creative permit writing authorizing the activity in a separate area could suffice to address what is ultimately a fairly unlikely scenario.

**11. Clarify language on labels for biosolids sold or given away in a bag or other container regarding making claims about being a "fertilizer" "nutrient content" "promoting growth" etc.**

- From Kyle Dorsey: Tenelco believes that the Department of Agriculture has generally carried the notion of "fertilizer" too far and has created unnecessary potholes in the road to implementation of the state biosolids program. The general position of the Department of Agriculture in the past has been that with regard to biosolids you cannot use the word "fertilizer," or make any claim as to "nutrient" content or enhanced (in any way) plant growth. To do so would bring you under the state fertilizer rules. The consequences of this outcome would be the application of fertilizer standards which are not appropriate for biosolids, the

imposition of a potentially significant fee, and the introduction of a whole new layer of regulation and oversight. The position taken by Agriculture has necessitated a lot of fairly clever exercises in semantics over the years. Tenelco recommends that the Director of the Department of Ecology address this in person with the Director of the Department of Agriculture. Several things are obvious here on reasoned consideration (a) biosolids make things grow better – fertilizer rule restrictions not withstanding; b) biosolids generally cannot guarantee nutrient content as can commercially produced fertilizers; c) the science behind the rules governing biosolids is quite different than the basis for regulating fertilizers (and should be respected); (d) the Department of Agriculture and its staff are not properly equipped to administer biosolids program rules, (e) the state biosolids program is no threat to commercial fertilizer manufacturing and sales, and (f) there was nowhere at no time under any circumstance of any kind any thought whatsoever that the Department of Agriculture should regulate biosolids or make it awkward for the Department of Ecology and its stakeholders to implement the biosolids beneficial use program mandated by statute. Tenelco's preferred outcome is for (a) the Department of Agriculture to concede the aforementioned points; (b) for producers of biosolids products either to not use the word fertilizer, or to use it with an appropriate caveat stipulating that the product is not a commercial fertilizer and nutrient amounts are not guaranteed; and (c) as for the middle ground regarding the use of words and terms relating to enhanced plant growth, etc., producers of biosolids should not be constrained from the use of such terms. Ecology may wish to enlist the support or assistance of the Northwest Biosolids Management Association, Pacific Northwest Clean Water Association, Coalition for Clean Water, and or individually the several hundred treatment works in the state which will certainly concur with this position. It's time to put this to rest.

**12. Impose a requirement that all biosolids beneficially used must be screened or ground, or another Ecology approved method must be used to remove recognizables.**

- From Kyle Dorsey: Tenelco well recalls discussions on this subject when the original rule was developed. Ecology wanted to require screening with no alternative for septage. The State Department of Health argued if it was to be required for septage then it should be required for biosolids as well. Members of a subcommittee assembled to discuss the matter were divided. Some health departments did not want to limit septage appliers to screening only, and Ecology did not believe the incidence of unscreened biosolids was significant. In retrospect both positions were likely wrong. Tenelco has significant experience with both grinding and screening of septage (not municipal biosolids). Grinding will reduce "recognizable" items in septage, but it essentially just turns large pieces of garbage into small pieces of garbage – and then places them in the environment. Grinder teeth/cutters also wear down over time, and as they wear become less efficient and effective. An *appropriately* sized screen, however, can be very effective at removing garbage from the waste stream and directing it to

where it belongs (Tenelco believes the 5/8" screen size recommended in the storage tanks issue paper is too large). As for picking up a site after application, Tenelco can not credit this idea whatsoever. And yes, screening is a cost, but it is a cost that can be passed on to generators if a requirement is adopted. Finally, Tenelco concurs with the requirement for screening for all biosolids but notes that some manufacturers market cutters which are designed to operate inline between a source and a pump for the express purpose of cutting or shredding trash components. How will the agency view a system which precedes screening with grinding or cutting, and can the impact to manufacturers be justified?

**13. Impose a requirement that only biosolids meeting one of the vector attraction reduction requirements in WAC 173-308-180 can be stored in a field; staging could still be allowed.**

- From Kyle Dorsey: Tenelco opposes this recommendation. Septage generally does not meet VAR standards except by tilling. This requirement could effectively shut down septage and municipal operations which depend on winter storage for operationally and use tillage for compliance. The economic impact of developing other storage mechanisms would be substantial, and in some case potentially not feasible. In the state rules, incorporation by tillage or injection was separated from other methods of VAR as a matter of regulatory convenience. Ecology is referred to the federal rules which recognize tillage and injection as methods of vector attraction reduction together with other forms. Further, Tenelco recalls similar discussions with U.S. EPA recognizing that staging or storage is not land application – and the VAR standard is not imposed until land application occurs. This is a situation where the agency must employ good judgment in individual circumstances. A winter-stored pile of biosolids has far less surface area of exposure to vectors than the many acres that may be covered by the pile if the material is not tilled in. Further, the birds mentioned below are the same ones who routinely feast on road kill, scavenge though dumpsters, and hang out at landfills – none of which are related to biosolids activities but which seem to pose relatively little concern. Lacking clear evidence that the current approach poses a significant health threat, and given that the state program is consistent with federal program implementation in its present form, Tenelco believes Ecology should implement additional/more stringent requirements in the permitting process where they can be justified, and where the permit holder has an opportunity to negotiate or appeal if appropriate.

**SEPTAGE MANAGEMENT**

**14. Impose a requirement for a permit for all facilities that treat or land apply septage (septage management facilities or SMFs).**

- From Kyle Dorsey: Tenelco concurs, but has reservations about cost and agency implementation.

**15. Redefine "domestic septage Class I" to clearly state that the material can include up to 25% Class II septage or 25% grease trap waste or 25% of a combination of both, but not more than 25% of either or a combination of both.**

- From Kyle Dorsey: Tenelco has no objection, but we think this is the kind of adjustment that looks good on paper only; enforcement will be difficult and compliance will be problematic. A pumper with a typical 3,000 gallon truck who services a grease trap and two septic tanks will likely exceed the 25% threshold. Is it the intent of the agency then to prohibit land application of that material? If so, small pumpers would likely have to develop additional treatment/holding systems, purchase larger trucks or forgo servicing grease traps. As a practical matter it is perhaps worth noting that every septic tank installed is in fact a grease trap. The grease is largely captured in the scum layer of the tank, and will be present in relation to the culinary habits of the persons using the system. Tenelco is not advocating for direct land application of grease trap waste, only noting that the rule anticipates a simplicity that does not exist. Regarding Class II material, Tenelco suspects the rule is largely unenforceable. Frankly, this is an area where the federal program clearly erred in making assumptions about the conduct of an industry and the practical matters of day-to-day business operations. We support Ecology's inclination to reexamine the question of mixtures, percentages and definitions.

**16. Eliminate the possibility of land application of Class II septage if >25% by volume of a given load.**

- From Kathleen Deason: It is the mission of the Foster Creek Conservation District to protect the natural resources of Douglas County. The Conservation District feels the land application of septage should only be permitted with full disclosure of chemical additives from chemical toilets and with sufficient proven study that these additives will not pose potential harm to soil or water resources.

- From Kyle Dorsey: Again, this looks fine on paper. Tenelco questions the practicality of implementation but agrees this would create an intended consistency under the present rules.

- From Jim Leir: I'm submitting the following comments to the Biosolids rule revision effort for your consideration. I have concerns about the potential for ground water contamination caused by Domestic septage - Class II when discharged to land. As you know, Class II Domestic Septage is defined in 173-308-080 as: ". . . liquid or solid material removed from portable toilets, type III marine sanitation devices, vault toilets, pit toilets, RV holding tanks or other similar holding systems that receive only domestic sewage."

  It is my understanding that chemical toilet fluids may contain formaldehyde and/or formaldehyde derivatives. From my research, I gathered the following

information from a report by the: ALBERTA ENVIRONMENT – SEPTAGE MANAGEMENT ADVISORY COMMITTEE

> Wastes from RV and portable toilets might also contain chemicals such as odour control, antibacterial and disinfection agents. Commonly used chemicals are biodegradable, based on information supplied by the suppliers in Edmonton. The chemicals may be bacteriological products, enzyme formulations, quaternary ammonium-based compounds ("quats," which often impart a pine scent), or formaldehyde- or paraformaldehyde based compounds. Ammonium- and formaldehyde-based compounds have the ability to kill or severely impede useful bacteria during wastewater treatment. Moreover, formaldehydes have low biodegradability and are known carcinogens (Camp Green Canada, Thetford Corporation 2003).

Also, the following publication has extensive data about formaldehyde's toxicity: **Environmental Data on Organic Chemicals (2nd edition) 1983; Van Nostrand Reinhold Company Inc.**

I am concerned that there may be a risk of polluting ground water with hazardous substances from these chemical toilet additives.

Formaldehyde is defined as a hazardous substance in 173-303-9905 Dangerous Waste constituents list**.**

Formaldehyde (Methelyene, oxide)
Formic acid (Methanoic acid)

Pasted below is a Department of Health rule:

Chapter 246-273 WAC On-site sewage system additives
WAC 246-273-050 Ingredients — Prohibitions and conditions.

(1) The following substances and compounds shall not be ingredients of approved on-site sewage disposal system additives. Trace amounts of these substances and compounds may exist in approved on-site sewage disposal system additives if deemed safe by the department for use in an on-site sewage disposal system.

(a) Any substance or compound listed as an EPA toxic pollutant in Title 40 Code of Federal Regulations (CFR 40) 1994, Part 122, Tables II, III, and V of Appendix D:

**Table IV-Toxic Pollutants and Hazardous Substances Required To Be Identified By Existing Dischargers If Expected To Be Present**
*Hazardous Substances*
Formaldehyde

The current Biosolids rule has this provision:

**173-308-060 Biosolids not classified as solid waste.**

(1) The state of Washington recognizes biosolids as a valuable commodity. Biosolids are not solid waste and are not subject to regulation under solid waste laws.
(2) Municipal sewage sludge or septage that fails to meet standards for classification as biosolids is a solid waste, and may not be applied to the land.
(3) Municipal sewage sludge or septage that will be disposed in a landfill is a solid waste.

Can we agree that formaldehyde-based chemical toilet additives should not be regarded as a valuable commodity, do not meet the standards for classification as biosolids, and should be classified as something else (solid waste?)?

Chemical toilet products can be biodegradable and based on enzyme formulations. The current Rule does not specify that Class II Domestic Septage shall not be land applied when containing hazardous substances. The revised Rule should ban the land application of chemical toilet additives that pose a risk to ground and/or drinking water.

**17. Redefine "domestic septage Class III" to include the statement "and that has a sufficiently long residency time to be considered largely stabilized."**

- From Kyle Dorsey: Tenelco disagrees with this recommendation. It will be largely impossible for pumpers to know how long something has been held in a system and whether it is adequately stabilized. It also unlikely that many owners who depend on such services and systems will know either. Language regarding residency time was included in the definition of Class I septage as a means of distinguishing it from Class II materials. That stipulation is not found in federal rules. At that there is no specific time period or physical characteristic to measure the question of stabilization. The intent of the Class III designation was to create latitude to allow septage facilities to accept materials which were not strictly speaking domestic septage/sewage, but which would pose no more threat than typical Class I materials. It was intended to leave this in the discretion of staff and to allow policy to evolve regarding the classification of specific sources/materials over time. In general. Tenelco hopes the agency will keep certain things at the forefront of its decision making regarding the regulation of septage. There is a long-standing industry built around providing services to the subject systems and devices. Changes will be difficult for Ecology and stakeholders to implement, and may be costly. There is an established trend for small and mid-sized treatment works to decline to accept these materials and in many areas of the state there are no feasible alternatives. The agency should not choose an increasingly restrictive course of action without considering the increasing pressures from the opposite end of the system. EPA established a system which allows the land application of septage, including virtually unstabilized material from holding tanks. Land application is deemed safe

because of additional site management restrictions. It may be more appropriate for the agency to condition operating permits with additional or more stringent requirements based on the kind of material the operator wishes to accept.

**18. Provide an exemption from the SMF permitting, recordkeeping, and reporting requirements for composting toilets from a household the content of which is used on-site. In doing so, state that the department does not consider the material resulting from such devices to be "Class A" and that persons with such devices should consult DOH guidance for management of the system (specifically Recommended Standards and Guidance For Water Conserving On-site Wastewater Treatment Systems. May 15, 2000). Larger systems would still need to have their output removed and ultimately managed at a permitted operation or seek coverage under the GP.**

- From Kyle Dorsey: Ecology has previously worked with the Department of Health to develop guidance for composting toilets and explored this question thoroughly at that time. That guidance contains the following observation and finding: *Neither the federal or state sewage sludge/biosolids rules provide any exemptions or allowances for small quantity generators from any parts of the rules. As such, the product from small composting toilets must be managed by the same regulations, and applied with the same degree of stringency, as sewage sludge/biosolids generated by the largest of generators. Because the Washington state program must, by law, meet or exceed the stringency of the federal program, the state cannot relax these requirements for the product of composting toilets unless rule changes are made at the federal level.* Tenelco believes an exemption would be inconsistent with federal program expectations, but more importantly it may engender an improper sense of security about the product of composting toilets. The existing Health Department guidance contains adequate direction for the management of waterless toilet residuals. Tenelco would prefer the continued policy of benign neglect to one which would create exemptions at odds with he federal program and which might lead to poor decision making by operators and owners. As a final note, there is no definition here for "larger systems," as advanced in the position statement.